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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/763,752	01/22/2004	Kevin James Cherkauer	BEA9-2003-0019US1	7696

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INTELLECTUAL PROPERTY LAW OFFICES
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EXAMINER

LEWIS, CHERYL RENE A

ART UNIT	PAPER NUMBER
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2167

DATE MAILED: 08/07/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

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Office Action Summary

Application No.

10/763,752

Applicant(s)

CHERKAUER ET AL.

Examiner

Cheryl Lewis

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 January 2004.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 January 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 1/22/04.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

1. Claims 1-20 are presented for examination.

Information Disclosure Statement

2. The information disclosure statement filed January 22, 2004 fails to comply with 37 CFR 1.98(a)(2), which requires a legible copy of each cited foreign patent document; each non-patent literature publication or that portion which caused it to be listed; and all other information or that portion which caused it to be listed. It has been placed in the application file, but the information referred to therein has not been considered.

The applicants have not provided a copy of the following reference:

- (a) JP 2205970 A2;

Drawings

3. The drawings are objected to because drawing figures 1-4 depict a partial view of the drawing figures. A box and/or a line drawn around each individual drawing figure is needed to show each individual figure as a separate entity (MPEP 37 CFR 1.84(h)).

As a convenience to the applicants, the examiner has attached an amendment of drawing figures 1 and 2 to show by example, how to effectively amend drawing figures 1 and 2.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended

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replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Duplicate Claims, Warning

4. Applicant is advised that should claims 9, 11, 15, and 17 be found allowable, claims 10, 12, 16, and 18 will be objected to under 37 CFR 1.75 as being a substantial duplicate thereof. When claims in an application are duplicates or else are so close in content that they both cover the same thing, despite a slight difference in wording, it is proper after allowing one claim to object to the other as being a substantial duplicate of the allowed claim. See MPEP § 706.03(k).

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 7-20 are rejected under 35 U.S.C. 102(b) as being anticipated by Das et al. (Pat. No. 6,470,330 B1 filed November 2, 1999, claims priority to provisional application no. 60/107121 filed November 5, 1998, hereinafter Das).

7. Regarding Claims 7, 8, 14, and 20, Das teaches a database system with methods for estimation and usage of index page cluster ratio (ipcr) and data page cluster ratio (dpcr).

The method and associated system for a database system with methods for estimation and usage of index page cluster ratio (ipcr) and data page cluster ratio (dpcr) as taught or suggested by Das includes:

receiving a plurality of queries with respect to data in at least one of a plurality of tables in a database (Abstract, lines 1-25, 'A database system with improved query execution performance is describe.'; '...relational table are in the extents.', col. 6, lines 4-13), wherein each table occupies at least one extent (col. 2, lines 31-51. '...a given relational table are in a fixed group of pages called "extents".', col. 7, lines 38-63, col. 8, lines 1-15, col. 9, lines 13-33); reviewing each query (col. 6, lines 55-67, 'Query Optimization', col. 7, lines 1-9) and determining a respective extents list of extents

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containing data needed by a query (figures 3-5, col. 8, lines 58-67, 'Consider FIG. 3 illustrating a table with twelve data rows (R1-R12), five (data pages DP1-3 of extent E1 and DP1-2 of extent E2), and two index leaf pages (ILP1-2), where the data come from two extents.', col. 7, lines 65-67, col. 8, lines 1-21, col. 9, lines 1-46); and re-ordering extents lists based on an order (col. 4, lines 48-51, '...the extents in the order of the index rows...', col. 8, lines 57-67, col. 9, lines 1-10 and 13-33) calculated to be more efficient for execution of a plurality of queries (col. 15, lines 17-26); loading extents from a database ordered in extents lists into a buffer cache (col. 8, lines 57-67); and executing queries on data in respective extents in a buffer cache to determine respective results (col. 8, lines 57-67).

8. Regarding Claims 9-13 and 15-19, Das teaches monitoring which extents are presently in a buffer cache (col. 8, lines 57-67) and re-ordering extents lists so that at least some extents (col. 8, lines 57-67) already in a buffer cache are used more efficiently by a plurality of queries (col. 8, lines 57-67).

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claims 1-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Das et al. (Pat. No. 6,470,330 B1 filed November 2, 1999, claims priority to provisional

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application no. 60/107121 filed November 5, 1998, hereinafter Das) and French et al.

(Pat. No. 5,794,229 filed December 11, 1995, hereinafter French).

11. Regarding Claim 1, Das teaches at least one memory device (col. 4, lines 36-64) suitable to hold a database having a plurality of tables of data (Abstract, lines 1-25, 'A database system with improved query execution performance is describe.'; '...relational table are in the extents.', col. 6, lines 4-13), wherein each table can occupy at least one extent (col. 2, lines 31-51. '...a given relational table are in a fixed group of pages called "extents".', col. 7, lines 38-63, col. 8, lines 1-15, col. 9, lines 13-33); a buffer cache suitable to store a plurality of extents (col. 8, lines 57-67); reviewing each query (col. 6, lines 55-67, 'Query Optimization', col. 7, lines 1-9) to determine a respective extents list of extents containing particular data needed by a query (figures 3-5, col. 8, lines 58-67, 'Consider FIG. 3 illustrating a table with twelve data rows (R1-R12), five (data pages DP1-3 of extent E1 and DP1-2 of extent E2), and two index leaf pages (ILP1-2), where the data come from two extents.', col. 7, lines 65-67, col. 8, lines 1-21, col. 9, lines 1-46); retrieving extents from memory devices as ordered in extents lists (col. 8, lines 57-67); storing extents that are retrieved in a buffer cache (col. 8, lines 57-67); and executing queries on particular data in extents stored in a buffer cache to determine respective results (col. 8, lines 57-67); and a query monitor (col. 6, line 56) suitable to re-order extents lists so that extents that are retrieved and stored in a buffer cache used more efficiently by queries (col. 8, lines 57-67).

However, Das does not expressly teach a database engine.

French teaches a database engine (col. 7, lines 35-47).

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It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the database system of Das with the database system of French because French's database system could enable the database system of Das to comprise a database system server (dss), wherein the database system server processes queries and retrieves the most efficient information of interest stored in columns represented as cells, each cell is arranged as a column value for a particular record.

12. Regarding Claims 2-6, the limitations of these claims have been noted in the rejections of claims 1 and 7-20 presented above. They are therefore rejected as set forth above.

NAME OF CONTACT

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Cheryl Lewis whose telephone number is (571) 272-4113. The examiner can normally be reached on 6:30-3:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Cottingham can be reached on (571) 272-7079. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

(571) 273-4113 (Use this FAX #, only after approval by Examiner, for "INFORMAL" or "DRAFT" communication. Examiners may request that a formal paper/amendment be faxed directly to them on occasions.).

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist/ Technology Center (571) 272-2100.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see <http://pair-direct.uspto.gov>.

Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to read "Cheryl Lewis". The signature is fluid and cursive, with the first name "Cheryl" written in a larger, more prominent script than the last name "Lewis".

Cheryl Lewis
Patent Examiner
August 3, 2006

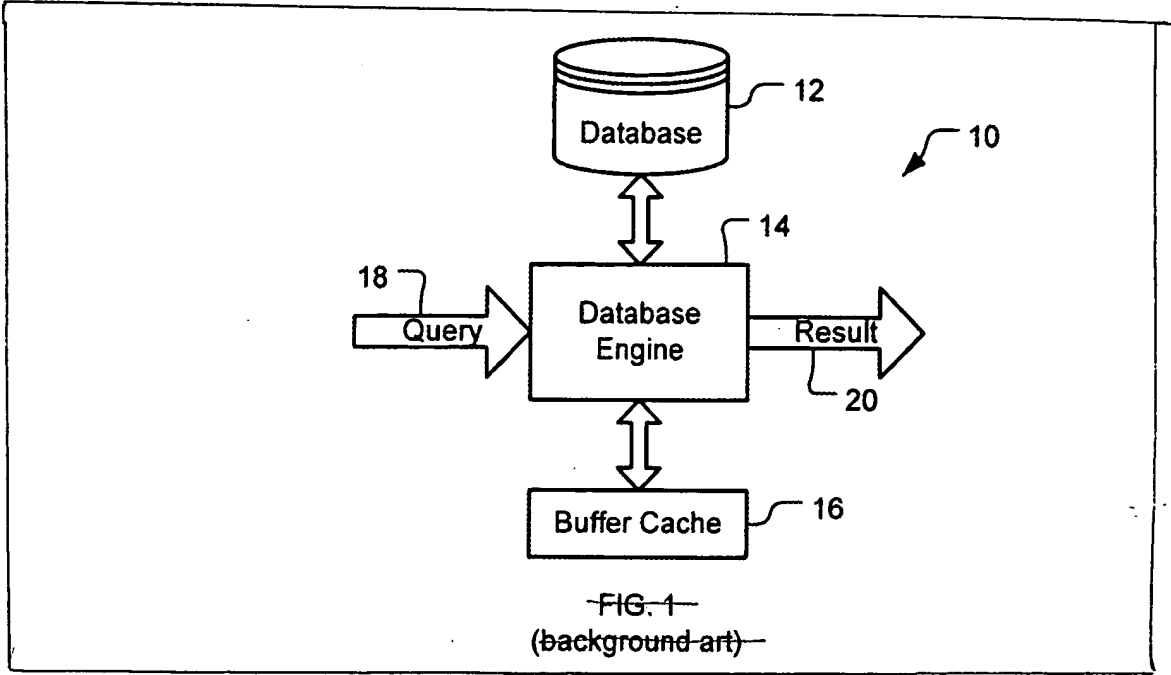


FIG. 1
(background art)

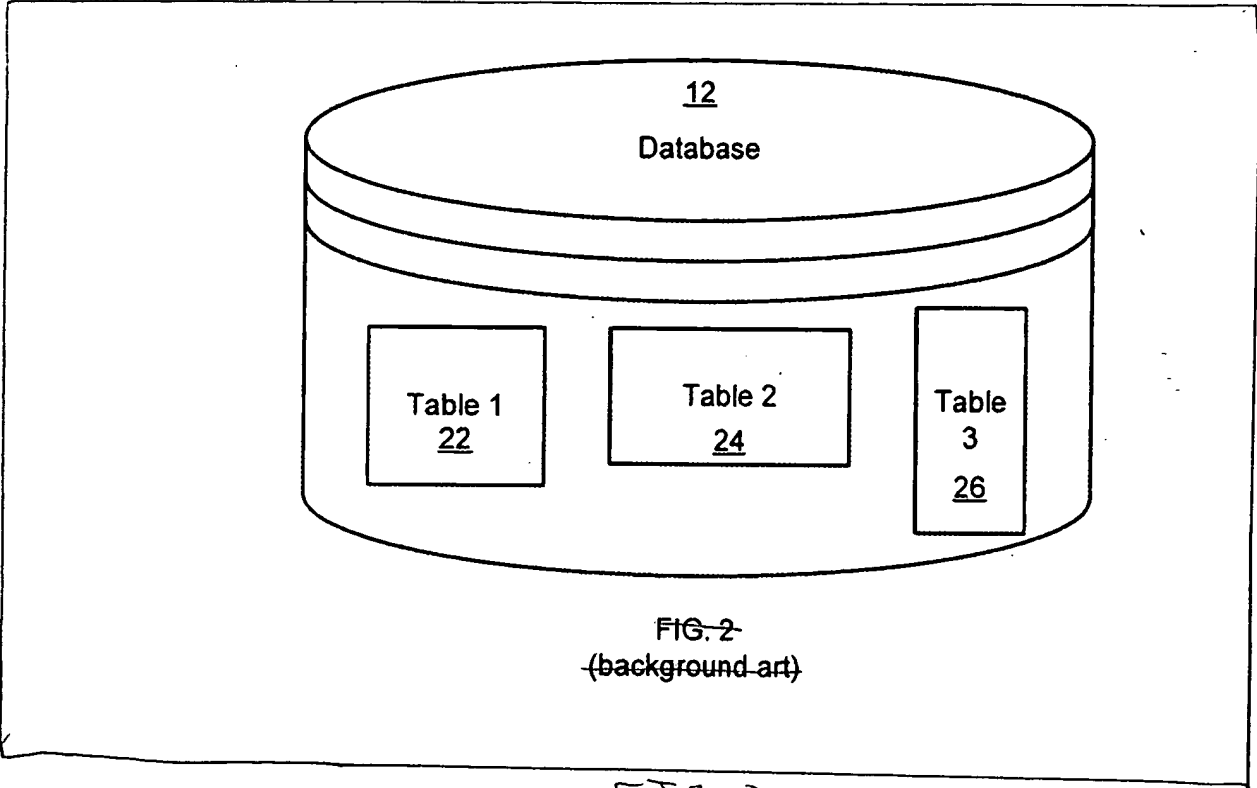


FIG. 2
(background art)

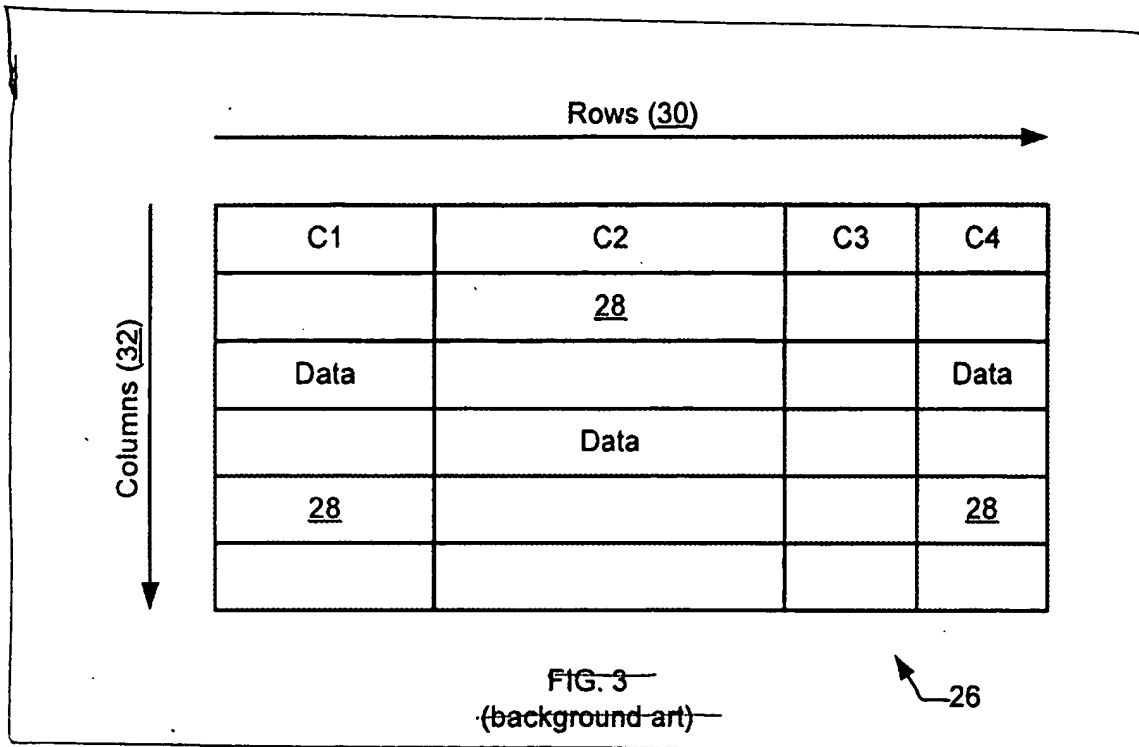


FIG. 3
(background art)

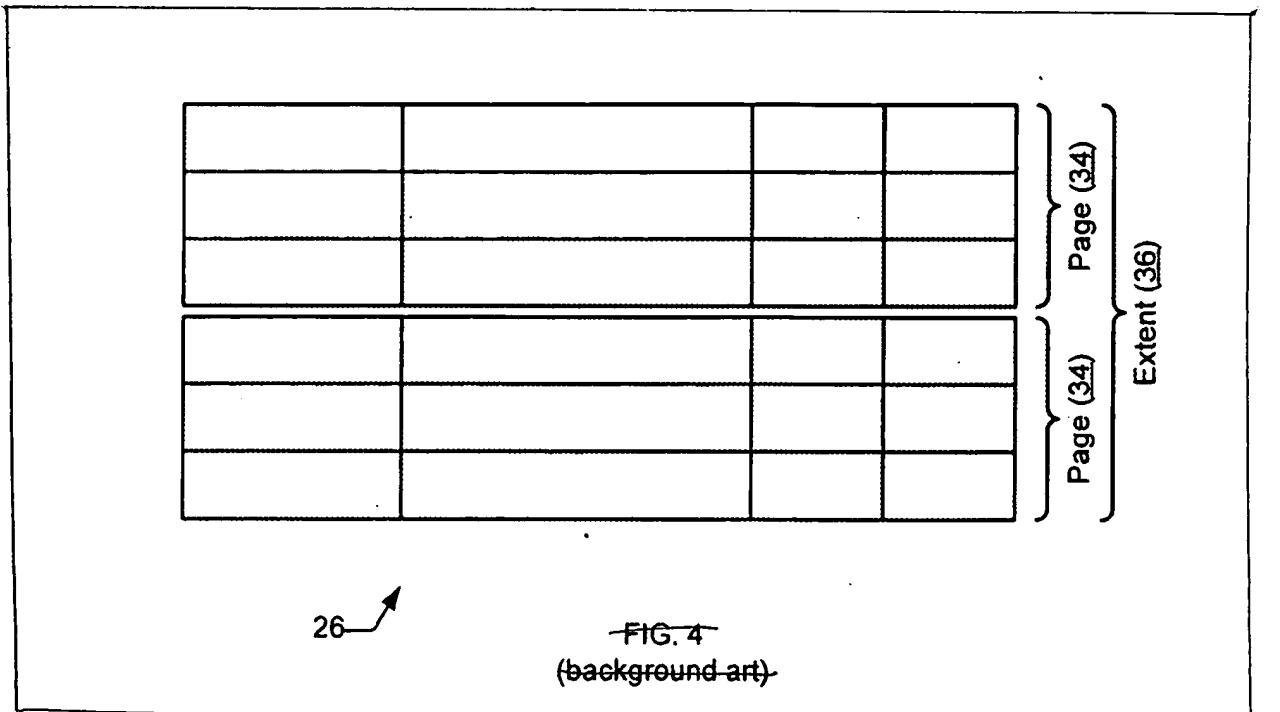


FIG. 4
(background art)